

CLAIMS

1. A method, comprising:
 - a) generating a digital document which records events occurring in maintenance of an aircraft; and
 - b) generating a Message Authentication Code, MAC, from the digital document.
2. Method according to claim 1, and further comprising:
 - c) encrypting the MAC into cyphertext.
3. Method according to claim 2, and further comprising:
 - d) storing the cyphertext and the digital document.
4. Method according to claim 3, and further comprising:
 - e) transmitting the cyphertext and the digital document to a database management system;
 - f) extracting data items from the digital document; and
 - g) inserting the extracted data items into a database.
5. Method according to claim 4, and further comprising:
 - h) recovering the MAC from the cyphertext; and
 - i) ascertaining validity of the digital document, using the MAC.
6. A method of documenting an operation performed upon an aircraft by a party, comprising:
 - a) accepting information from the party, and generating a digital document containing the information;

- b) applying an algorithm to the digital document, and producing an output; and
- c) encrypting the output into cypher text, using an encryption key in possession of the party.

7. Method according to claim 6, in which the party signs no paper document corresponding to the digital document.

8. Method according to claim 6, and further comprising:

- d) transmitting the cypher text and the digital document over a public-access network, to a storage location.

9. Method according to claim 8, and further comprising:

- e) recovering the output from the cypher text;
- f) applying the algorithm to the digital document, to produce a second output; and
- g) comparing the recovered output with the second output.

10. Method according to claim 9, and further comprising:

- h) extracting items of information from the digital document, and inserting the items into a searchable database.

11. Method according to claim 10, and further comprising:

- i) maintaining links between items and both (1) the digital document and (2) the cypher text, wherein the digital document from which a specific cypher text originated can be

identified and validated using the cypher text.

12. A system, comprising:

- a) a first repository, containing:
 - i) multiple digital documents generated by parties involved in maintenance of aircraft;
 - ii) for each digital document, cypher text of a Message Authentication Code, MAC;
- b) a second repository, containing:
 - i) a searchable database; and
 - ii) within the searchable database, data items extracted from the digital documents.

13. System according to claim 12, and further comprising:

- c) links which
 - i) are associated with data items in the database, and
 - ii) identify which digital document acted as the source of the respective data items.

14. Apparatus, comprising:

- a) a building;
- b) an aircraft within the building;
- c) means for generating maintenance records of the aircraft in digital format; and
- d) a system for generating a Message Authentication Code, MAC, based on the records.

15. Apparatus according to claim 14, and further comprising:

- e) means for verifying authenticity of a set

of digital maintenance records, based on an MAC associated with the records.

16. Apparatus according to claim 14, and further comprising:

e) means for transmitting the maintenance records in digital format to a remote site.

17. Apparatus according to claim 16, and further comprising:

f) means for encrypting the maintenance records in digital format, prior to transmission to the remote site.